

APPENDIX - (BLACK-LINE COPY) SHOWING CHANGES TO CLAIMS

Please amend Claims 1, 2, 22, 25, 31-33, 40-42, and 45-47, as follows.

1. (Amended) A system for transmitting data in a data stream to grouped recipients, comprising:

a server, for receiving users' requests for transmission of [said] user requested data in a data flow for reception by [to] said users;

said server for transmission of at least one data stream, and responsive to said users' [requests,] requests for arranging said users in [groups] at least one group of recipients of a respective data stream of the at least one data stream, with each [said] user being arranged in a respective group of the at least one group, and wherein each respective group for receiving said user requested data in said respective data stream corresponding to a point of transmission of said data flow; and

said server, responsive to the arrangement of said users in said at least one group [groups], for transmitting said user requested data in [a] said respective data stream to each said respective [groups] group.

2. (Amended) The system of Claim 1, wherein, said server realigns a respective user with said respective data stream to change the relative position of said respective user to the data being transmitted in said respective data stream, responsive to a signal from said respective user.

22. (Amended) [A] The system of Claim 1, wherein,

said server includes means for disconnecting a respective user with said respective data stream at an identifiable location in said respective data stream and for reconnecting said user to another data stream of the at least one data stream.

25. (Amended) [In a] A system [for transmitting data in a data stream sent from a server to a plurality of users requesting access to said data stream at substantially the same time, and responsive to users' requests for data, arranging said users into groups by time or number of requests, for transmission of the same data in said data stream to the respective users in respective groups, and distributing the user load on said server and shifting said user load toward a steady state load by distributing said groups over said data transmission by time of said data transmission or place in said data transmission,] comprising:

a server for transmitting user requested data in a data flow for reception by a plurality of users requesting said data at substantially the same time;

said server having means for connecting said server to a telecommunications network for the transmission of data; and

said server including means for responding to user requests for data, said user requests being received from said telecommunications network [for data], and for identifying the individual requesters as the source of respective user requests for data and arranging said individual requesters in respective groups for receiving said user requested data in a data stream, and wherein said respective groups arranging said individual requesters for reception of said user requested data in said respective data stream corresponding to a point of transmission of said data flow by time of request or by number of requests, for transmission of the same user requested data in said respective data stream to the respective users in respective groups, and distributing the user load on said server and shifting said user load toward a steady state load on the server by distributing said respective groups over the transmission of said data flow by time of data stream transmission or by place in said data flow transmission.

31. (Amended) The system of Claim 25, wherein said server includes means for shifting said respective individual requesters between said groups to change the time of reception of said user requested data relative to said data stream transmission.

32. (Amended) The system of Claim 25, wherein,

said user requested data is accessed from a data store communicatively coupled to the server; and

said server includes means for changing the location in the data store accessed for shifting the location of the user requested data relative to said data flow transmission.

33. (Amended) A method [for transmitting data to users requesting said data, arranged in groups to receive said data,] comprising the steps of:

receiving, at a server having a data store, user requests for transmission of user requested data in a data flow for reception by a plurality of users across a telecommunications medium;

[connecting a server having a data store, and an interface for connection to said server for sending data from said data store through said telecommunications medium;]

responsive to said user requests, arranging said plurality of users in at least one group of recipients of said user requested data in said data flow [groups] with each [said] user of the plurality of users being arranged in a respective group of said at least one group, and wherein each respective group for receiving said user requested data in a respective data stream corresponding to a point of transmission of said data flow; and

responsive to said user requests, sending said user requested data in a respective data stream from the data store of the server to the telecommunications medium, wherein each said respective data stream being destined for reception by said respective group of recipients.

[sending said data stream from said data store, as streaming data to said respective groups.]

40. (Amended) The method of claim 37 [33], wherein, said data is transmitted with identifiable locations in said data stream, and the method further comprising the steps of:

identifying a respective identifiable location in said data stream corresponding to said user signal; and

moving said user to another of said groups receiving said data stream from a location in said data stream related to said respective identifiable location.

41. (Amended) In a system for transmitting data in a data stream sent from a server to a plurality of users requesting access to said data stream at substantially the same time, a method [for arranging said users into groups by time or number of requests, for transmission of the data in said data stream to the respective users in respective groups, and distributing the user load on said server and shifting said user load toward a steady state load by distributing said groups over said data transmission by time of said data transmission or place in said data transmission,] comprising the steps of,

a plurality of users receiving user requested data in a data flow by receiving at least one data stream sent from a server;

arranging said plurality of users into groups, comprising a first group and a second group, each of said groups for reception of a respective data stream transmitted from the server, each respective data stream corresponding to reception of user requested data at a point of transmission of said data flow; and

responding, at the server, to a request from one of the plurality of users that is in said first group by moving the one of the plurality of users from said first group to said second group for reception, by said one of the plurality of users, of user requested data at a point of said data flow relatively displaced in space or time from reception by said first group.

[arranging a server having a data processor to a telecommunications network for the transmission of data; and

responding to requests for data received through said telecommunications network, for identifying the individual requesters as the source of respective requests and arranging said individual requesters in respective groups for receiving said data.]

42. (Amended) The method of Claim 41, wherein,

said step of arranging includes the step of realigning a [respective] user of the plurality of users with said data stream to change the relative position of said [respective] user at a different point of [to the data being transmitted in] said data stream, responsive to a signal from said respective user.

45. (Amended) A computer program product for use in the operation of a computer transmitting data in a data stream to users requesting said data, the computer program product including computer instructions comprising instructions for: [.]

[means for] connecting a telecommunications medium with said computer for sending said data in said data flow for reception by [to] said users [of said data];

[means for] arranging said users in groups with each said user being arranged in a respective group, responsive to a request made by said user, and wherein each said respective group corresponding to reception by said user of user requested data in a data stream at a point in said data flow; and

[means for] sending said data flow [stream] in a plurality of data streams from [said] a data store for reception of user requested data at a plurality of points of said data flow by said groups of said users. [, as streaming data to said respective groups.]

46. (Amended) [In a system for transmitting data in a data stream sent from a server to a plurality of users requesting access to said data stream at substantially the same time, a] A computer program product for use in [a method of] operating a computer system, the computer program product including computer instructions comprising instructions for:

transmitting user requested data in a data flow sent in at least one data stream from a server to a plurality of users across a telecommunications network;

arranging said plurality of users into groups according to reception of requests from said plurality of users for said user requested data, each of said groups corresponding to reception of user requested data in a data stream at a point in said data flow; and

responding to a request from one of the plurality of users by moving the one of the plurality of users from a first group to a second group for reception, by said one of the plurality of users, of user requested data at a point of said data flow relatively displaced in space or time from reception by said first group.

[for arranging said users into groups by time or number of requests, for transmission of the data in a data stream to the respective users in respective groups, and distributing the user load by distributing said groups over said data transmission by time of said data transmission or place in said data transmission, comprising the steps of,

responding to requests for data received from requesting users, for identifying the individual requesters as the source of respective requests and arranging said individual requesters in respective groups for receiving said data; and

distributing said groups over said data transmission by time said data stream transmission or place in said data transmission.]

47. (Amended) A computer program product for use in [a method of] operating a computer, the computer program product including computer instructions comprising instructions for: [comprising the steps of:]

receiving requests for data from users, said data being organized for transmission in a data flow from a data store; [requesting said data;]

arranging said users in groups [with each said user being arranged in a respective group] , wherein each of said groups corresponding to reception of user requested data in a data stream at a point of said data flow; and

responsive to said users' requests, sending said user requested data in at least one data stream from said data store [, as streaming data] to said [respective] groups with said groups receiving separate respective portions of said data relatively displaced in space or time.

REMARKS

Reexamination and reconsideration of this application as amended is requested. By this amendment corrected Drawings have been submitted for Examiner approval, and Claims 1, 2, 22, 25, 31-33, 40-42, and 45-47, have been amended. See the Appendix above for a black-line copy of the amended Claims. After this amendment, Claims 1-47 remain pending in the application.

Correction of Drawings

(1-3) The Examiner objected to the Drawings due to informalities. Applicants have made necessary formality corrections to the drawings, and hereby submit two sets of formal drawings (each set comprising five sheets). No new matter has been added.

Applicants believe that the formality correction to the drawing figures, as shown in the attached two sets of formal drawings, five (5) sheets each, complies with all formal requirements. Accordingly, Applicant kindly requests that the Examiner accept the attached sheets as formal drawings, and to withdraw the objection to the drawings.

Rejection Under 35 U.S.C. Section 102 (e)

(4-37) The Examiner rejected Claims 1, 6, 7, 25, 29, 30, 33, 35, 36, 41, 45, 46, and 47, under 35 U.S.C. § 102 (e) as being anticipated by St. Maurice et al. (U.S. Patent No. 6,418,473).

Applicants have amended Claims 1, 25, 33, 41, and 45-47, to more clearly and distinctly recite the presently claimed invention.

According to the presently claimed invention, as recited for amended independent claim 1, and for all dependent claims depending therefrom, including dependent Claims 6 and 7, user requested data in a data flow is for transmission to

users arranged in groups, where each group is for receiving user requested data in a data stream corresponding to a point of transmission of the data flow.

Please note that the data flow is transmitted to the groups of users with each group receiving a data stream of user requested data at a point in the data flow. See for example, the originally filed specification, on page 8, lines 4-5, and also see page 7, lines 18-26, with reference to FIG. 2. No new matter has been added by this amendment. The presently claimed features constitute a powerful means for managing demands or requests made at substantially the same time or at the same location in a data stream, which may be beyond a system capability for supplying the information within the time expected. This grouping of users and distributing transmission of data streams at points in a data flow can reduce peak loads on a server system and can shift demand for server resources over the space of the data transmission while preserving the impression of immediate satisfaction for each information recipient. This is a significant advantage of the presently claimed invention not found in any of the cited prior art references.

On the other hand, the cited St. Maurice reference discusses transmission of separate independent channels of streaming data. Each channel, that is transmitting separate and independent streaming data, is selectable by a user, while viewing a preview channel window that provides channel choices, to receive one of the available channels of streaming data. See, for example, the St. Maurice Abstract section, and the specification, column 1, lines 32-40. Note that the service provider, according to St. Maurice, is collecting data on user viewing habits with respect to the plurality of streams being previewed, and then the service provider can modify the streams offered via the preview channel based upon usage patterns. See column 3, lines 1-5. Client viewing preferences are tracked to help a content provider adjust the available channels of content. See for example, column 4, line 25, and lines 37-44.

Therefore, it should be clear that St. Maurice does not teach, anticipate, or suggest, transmitting user requested data in a data flow to groups of users with each

group receiving a data stream of user requested data at a point in the data flow, as taught by and recited for the presently claimed invention.

With respect to amended independent Claim 25, and for all dependent claims depending therefrom, including dependent Claims 29 and 30, similar arguments apply as discussed above with respect to Claim 1. See also, for example, the originally filed specification, on page 9, lines 4-11. No new matter has been added.

With respect to amended independent Claim 33, and for all dependent claims depending therefrom, including dependent Claims 35 and 36, similar arguments as discussed above apply. No new matter has been added.

With respect to amended independent Claim 41, and for all dependent claims depending therefrom, similar arguments as discussed above apply. Also, see the specification on page 9, lines 4-11. No new matter has been added.

With respect to the three independent computer product claims 45, 46, and 47, similar arguments as discussed above apply.

In view of the discussion above, Applicants respectfully submit that St. Maurice does not teach, anticipate, or suggest, transmitting user requested data in a data flow to groups of users with each group receiving a data stream of user requested data at a point in the data flow, as taught and recited for the presently claimed invention.

Accordingly, since the presently claimed limitations are not taught, anticipated, or suggested by St. Maurice, Applicants believe that the rejection of Claims 1, 6, 7, 25, 29, 30, 33, 35, 36, 41, 45, 46, and 47, under 35 U.S.C. § 102 (e), has been overcome by the amendment and remarks above.

Rejection Under 35 U.S.C. Section 103 (a)

(38-104) The Examiner rejected Claims 2, 4, 8-21, 26, 27, 31, 32, 37, 39, and 42-44, under 35 U.S.C. § 103 (a) as being unpatentable over St. Maurice et al. (U.S. Patent No. 6,418,473) in view of Kalra et al. (U.S. Patent No. 5,953,506).

Applicants have amended independent Claims 1, 25, 33, and 41, and dependent Claims 2, 22, 32, and 42, to more clearly and distinctly recite the presently claimed invention. No new matter has been added.

First of all, Applicants respectfully disagree with Examiner's characterization of Kalra. Kalra does not teach realigning a user with the data stream to change the relative position of the user to the data being transmitted in the data stream. Kalra uses a base stream and a collection of additive streams that can be transmitted along with the base stream via a stream management module 20 illustrated in FIG. 2 to change the resolution of a reconstructed video stream to match desired resolution of a destination multimedia device 22. See, for example, column 4, lines 24-32, and column 7, lines 1-3. See also the Abstract section.

Secondly, as has been discussed with respect to St. Maurice, the streaming data is transmitted using separate independent channels that are selectable by a user while viewing a preview channel window that provides channel choices, to receive one of the available channels of streaming data. See, for example, the St. Maurice Abstract section, and the specification, column 1, lines 32-40. Note that the service provider, according to St. Maurice, is collecting data on user viewing habits with respect to the plurality of streams being previewed, and then the service provider can modify the streams offered via the preview channel based upon usage patterns. See column 3, lines 1-5. Client viewing preferences are tracked to help a content provider adjust the available channels of content. See for example, column 4, line 25, and lines 37-44.

On the other hand, for the presently claimed invention, user requested data in a data flow is for transmission to users arranged in groups, where each group is for receiving user requested data in a data stream corresponding to a point of transmission of the data flow.

Please note that, according to the presently claimed invention, the data flow is transmitted to the groups of users with each group receiving a data stream of user requested data at a point in the data flow. See for example, the originally filed specification, on page 8, lines 4-5, and also see page 7, lines 18-26, with reference to FIG. 2. This is very different than St Maurice's multiple independent channels of separate independent streaming data that are individually selectable by a user from a preview channel, and it is also very different than the Kalra transmission of a combination of a base stream and additive streams to match a profile of a client computer to provide a best combination of streams to the client computer to maximize the resolution of reconstructed video and/or audio at the client computer. Moreover, Applicants disagree with Examiner's characterization of Kalra as teaching the relocation of users between groups to receive data stream from another location in the data stream. Note that the present invention deals with user requested data being transmitted in data streams for reception by the groups in points in the data flow. Kalra, very differently, combines streams of data that must ALL be received by the client to then reconstruct a video and/or audio signal at the client computer. Kalra transmits different combinations of a base stream and additive streams to be all received by a client device. See, for example, column 7, lines 1- 5, and column 17, lines 62-64. Kalra's client device, contrary to characterizations in the Office Action, clearly does not move between groups of recipients to receive different relative locations of a data stream or to change relative time of transmission of data stream to the client device.

Therefore, it should be clear that neither St. Maurice, Kalra, nor any combination of the two cited references, teaches, anticipates, or suggests, transmitting user requested data in a data flow to groups of users with each group receiving a data stream of user requested data at a point in the data flow, as taught by the presently claimed invention and recited in accordance with amended independent Claims 1, 25,

33, and 41, and all dependent claims depending therefrom, including dependent claims 2, 4, 8-21, 26, 27, 31, 32, 37, 39, and 42-44.

Accordingly, since the presently claimed limitations are not taught, anticipated, or suggested by St. Maurice, Kalra, or any combination of the two cited references, Applicants believe that the rejection of dependent claims 2, 4, 8-21, 26, 27, 31, 32, 37, 39, and 42-44, under 35 U.S.C. § 103 (a), has been overcome by the amendment and remarks above.

Rejection Under 35 U.S.C. Section 103 (a)

(105-115) The Examiner rejected Claims 3, 5, 28, 34, and 38, under 35 U.S.C. § 103 (a) as being unpatentable over St. Maurice et al. (U.S. Patent No. 6,418,473) in view of Donahue et al. (U.S. Patent No. 6,411,616).

Applicants have amended independent Claims 1, 25, and 33, and accordingly all dependent claims depending therefrom respectively, including dependent claims 3, 5, 28, 34, and 38, to more clearly and distinctly recite the presently claimed invention. No new matter has been added.

First of all, Applicants respectfully disagree with characterization that Donahue arguably teaches a server arranging users into groups arranged by the size of the group. From the specific citations of Examiner, Donahue seems to teach that "there is no restriction on the location or the number of members in a host group." See Donahue, column 8, lines 38-39. This teaching appears contrary to arranging users into groups by the size of the group.

Donahue teaches high bandwidth broadcast of content to a user with apparatus that is connected to but distant to a remote Internet gateway.

Therefore, it should be clear that neither St. Maurice, Donahue, nor any combination of the two cited references, teaches, anticipates, or suggests, transmitting user requested data in a data flow to groups of users with each group receiving a data stream of user requested data at a point in the data flow, as taught by the presently claimed invention and recited in accordance with amended independent Claims 1, 25, and 33, and all dependent claims depending therefrom, including dependent claims 3, 5, 28, 34, and 38.

Accordingly, since the presently claimed limitations are not taught, anticipated, or suggested by St. Maurice, Donahue, or any combination of the two cited references, Applicants believe that the rejection of dependent claims 3, 5, 28, 34, and 38, under 35 U.S.C. § 103 (a), has been overcome by the amendment and remarks above.

Rejection Under 35 U.S.C. Section 103 (a)

(120-132) The Examiner rejected Claims 22-24, and 40, under 35 U.S.C. § 103 (a) as being unpatentable over St. Maurice et al. (U.S. Patent No. 6,418,473) in view of Gupta et al. (U.S. Patent No. 6,415,326).

Applicants have amended independent Claims 1 and 33, and accordingly all dependent claims depending therefrom respectively, including dependent claims 22-24 and 40, to more clearly and distinctly recite the presently claimed invention. No new matter has been added.

First of all, the Examiner has combined Gupta with St. Maurice to arguably obviate means of disconnecting a user with respect to the data stream at an identifiable connection.

However, Gupta clearly does not teach, anticipate, or suggest, transmitting user requested data in a data flow to groups of users with each group receiving a data stream of user requested data at a point in the data flow, as taught by the presently

claimed invention and recited in accordance with amended independent Claims 1 and 33, and all dependent claims depending therefrom, including dependent claims 22-24 and 40. Gupta's teaching focuses on tracking and correlating streaming data speeds at a multimedia player.

As has been already discussed above with respect to St. Maurice, the cited reference teaches the streaming data being transmitted using separate independent channels that are selectable by a user while viewing a preview channel window that provides channel choices, to receive one of the available channels of streaming data. See, for example, the St. Maurice Abstract section, and the specification, column 1, lines 32-40. Note that the service provider, according to St. Maurice, is collecting data on user viewing habits with respect to the plurality of streams being previewed, and then the service provider can modify the streams offered via the preview channel based upon usage patterns. See column 3, lines 1-5. Client viewing preferences are tracked to help a content provider adjust the available channels of content. See for example, column 4, line 25, and lines 37-44.

Therefore, it should be clear that neither St. Maurice, Gupta, nor any combination of the two cited references, teaches, anticipates, or suggests, transmitting user requested data in a data flow to groups of users with each group receiving a data stream of user requested data at a point in the data flow, as taught by the presently claimed invention and recited in accordance with amended independent Claims 1 and 33, and all dependent claims depending therefrom, including dependent claims 22-24 and 40.

Accordingly, since the presently claimed limitations are not taught, anticipated, or suggested by St. Maurice, Gupta, or any combination of the two cited references, Applicants believe that the rejection of dependent claims 22-24 and 40, under 35 U.S.C. § 103 (a), has been overcome by the amendment and remarks above.